

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
16 June 2005 (16.06.2005)

PCT

(10) International Publication Number
WO 2005/055248 A2

(51) International Patent Classification⁷: H01B 1/12,
I/20, C08L 39/04, H01L 51/30, 51/20

(21) International Application Number:
PCT/GB2004/004973

(22) International Filing Date:
25 November 2004 (25.11.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
0327654.0 28 November 2003 (28.11.2003) GB
0407852.3 7 April 2004 (07.04.2004) GB
0414347.5 26 June 2004 (26.06.2004) GB

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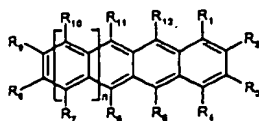
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(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
GB, GD, GE, GH, GM, GR, HU, ID, IL, IN, IS, JP, KE,
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,
ZW.

(84) Designated States (unless otherwise indicated, for every
kind of regional protection available): ARIPO (BW, GH,
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),

[Continued on next page]

(54) Title: IMPROVEMENTS IN AND RELATING TO ORGANIC SEMICONDUCTING LAYERS



(A)

(57) Abstract: An organic semiconducting layer formulation, which comprises: an organic binder which has a permittivity, ϵ , at 1,000 Hz of 3.3 or less; and a polyacene compound of Formula A: wherein: each of R_1 , R_2 , R_3 , R_4 , R_5 , R_6 , R_7 , R_8 , R_9 , R_{10} , R_{11} and R_{12} , which may be the same or different, independently represents hydrogen; an optionally substituted C_1 - C_{40} carbyl or hydrocarbyl group; an optionally substituted C_1 - C_{40} alkoxy group; an optionally substituted C_6 - C_{40} aryloxy group; an optionally substituted C_7 - C_{40} alkylaryloxy group; an optionally substituted C_2 - C_{40} alkoxycarbonyl group; an optionally substituted C_7 - C_{40} aryloxy carbonyl group; a cyano group (-CN); a carbamoyl group (-C(=O)NH₂); a haloformyl group (-C(=O)-X, wherein X represents a halogen atom); a formyl group (-C(=O)-H); an isocyano group; an isocyanate group; a thiocyanate group or a thioisocyanate group; an optionally substituted amino group; a hydroxy group; a nitro group; a CF₃ group; a halo group (Cl, Br, F); or an optionally substituted silyl group; and wherein independently each pair of R_2 and R_3 and/or R_8 and R_9 , may be cross-bridged to form a C_4 - C_{40} saturated or unsaturated ring, which saturated or unsaturated ring may be intervened by an oxygen atom, a sulphur atom or a group shown by formula -N(R₄)- (wherein R₄ is a hydrogen atom or an optionally substituted hydrocarbon group), or may optionally be substituted; and wherein one or more of the carbon atoms of the polyacene skeleton may optionally be substituted by a heteroatom selected from N, P, As, O, S, Se and Te; and wherein independently any two or more of the substituents R_1 - R_{12} which are located on adjacent ring positions of the polyacene may, together, optionally constitute a further C_4 - C_{40} saturated or unsaturated ring optionally interrupted by O, S or -N(R₄) where R₄ is as defined above) or an aromatic ring system, fused to the polyacene; and wherein n is 0, 1, 2, 3 or 4, also claimed is an electronic device, particularly an organic field effect transistor comprising the organic semiconductor layer formulation.